FaStGO – Facilitating Standards for Guarantees of Origin

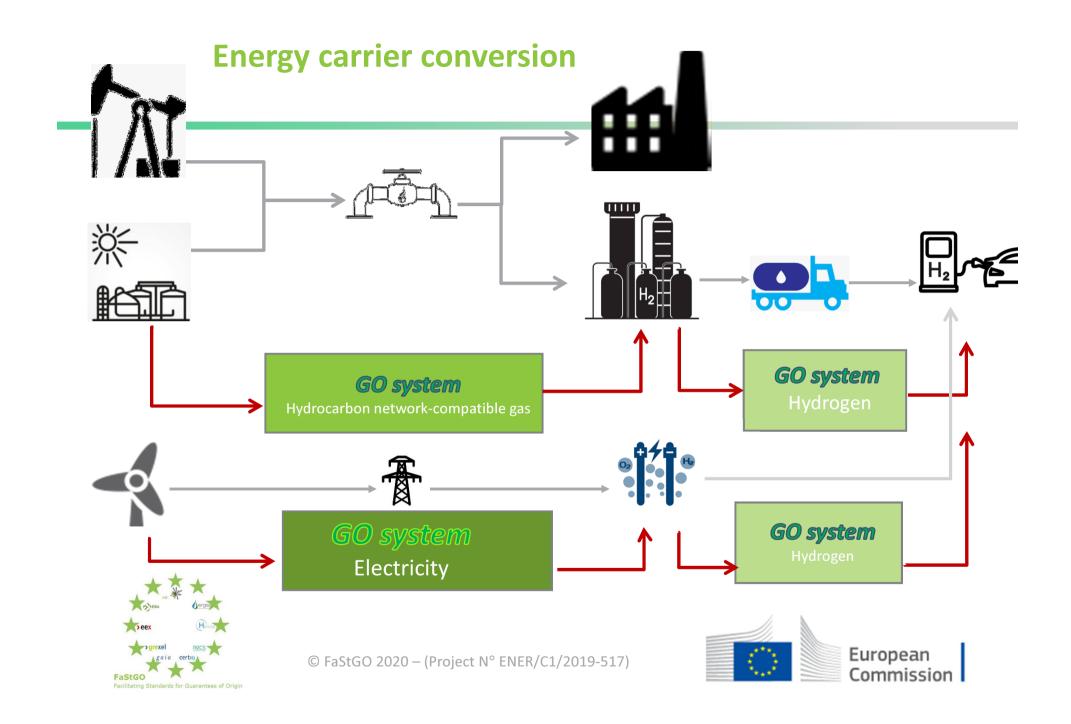
Energy carrier conversion

GO Conversion Issuance, as a facilitator of sector integration

Katrien Verwimp, FaStGO project leader







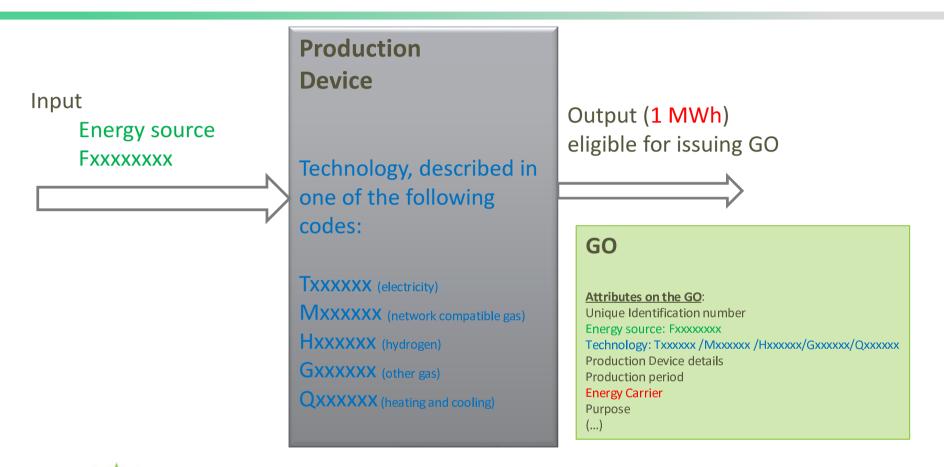
Conversion Issuance of guarantees of orign

- 1) Conversion Principles:
 - Cancel GOs for **measured** input energy carrier
 - Issue new GOs for **measured** output energy carrier
- 2) Attributes from cancelled GOs to be passed on to the newly issued GOs:
 - energy source
 - support (accumulated)
 - Label, if the label provider supports it
 - Optional: GHG emission data
- 3) Other attributes on the newly issued GOs:
 - Relate to the conversion production device





Generic GO issuing – Attributes on the GO







GO issuing with energy carrier conversion - generic

Input

Energy carrier A
Attributes: See GO_A

GO_A => Cancelled

Attributes on the GO:

Unique Identification number A

Energy source: Fxxxxxxxx A

Technology: Txxxxxx / Mxxxxx / Hxxxxxx / Gxxxxx / Qxxxxxx A

Production Device details A

Production period A

Energy Carrier A

Purpose A

Support: A

Label: A

(optional: Carbon Footprint: A)

(...)

Production Device

Technology, described in one of the following codes:

TXXXXXX (electricity)

Mxxxxxx (network compatible

as*)*

Hxxxxxx (hydrogen)

GXXXXXX (other gas)

QXXXXXX (heating and cooling

Output (1 MWh of energy carrier B) eligible for issuing GO_B

GO_B => issued

Attributes on the GO:

Unique Identification number B

Energy source: Fxxxxxxxx A

Technology: Txxxxxx / Mxxxxxx / Hxxxxxx / Gxxxxxx / Qxxxxxx B

Production Device details B

Production period B

Energy Carrier B

Purpose A

Support: A+B

Label: A+B if supported by label operator

(optional: Carbon Footprint: A +B, full GHG input quantity

to be maintained)

(...)





Biomethane converted into electricity

Input:

Energy carrier: Hydrocarbon gas, type Network Compatible Gas,

Attributes: see GO

GO_A

Attributes on the GO:

Unique Identification number A

Energy Carrier: Hydrocarbon gas, Network Compatible Gas

Energy source: F01010502 Agricultural by-products,

residues & waste

Technology: M010100 Anaerobic Digestion

Production Device details A

Production period A Purpose : Disclosure

Support: A Label: A

(optional: Carbon Footprint: A)

(...)

Production Device



Technology:

T050502

Combustion Engine

CHP

Output (1 MWh of Electricity)

eligible for issuing GO

GO_B

Attributes on the GO:

Unique Identification number B

Energy Carrier: Electricity

Energy source: F01040100 Agricultural by-products, residues &

waste

Technology: T050502 Combustion engine CHP

Production Device details B

Production period B
Purpose: Disclosure

Support: A+B

Label: A+B if supported by label operator

(optional: Carbon Footprint: A +B, full GHG input quantity to be

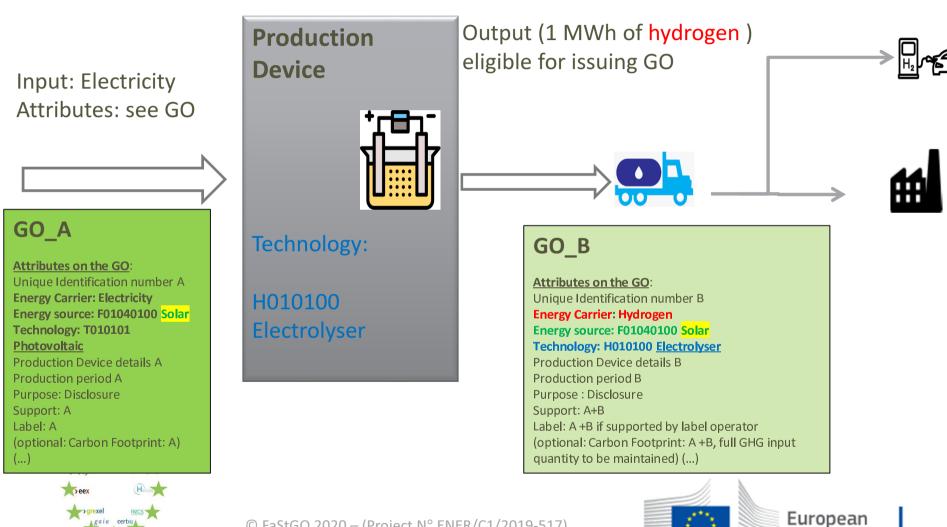
maintained)

(...)





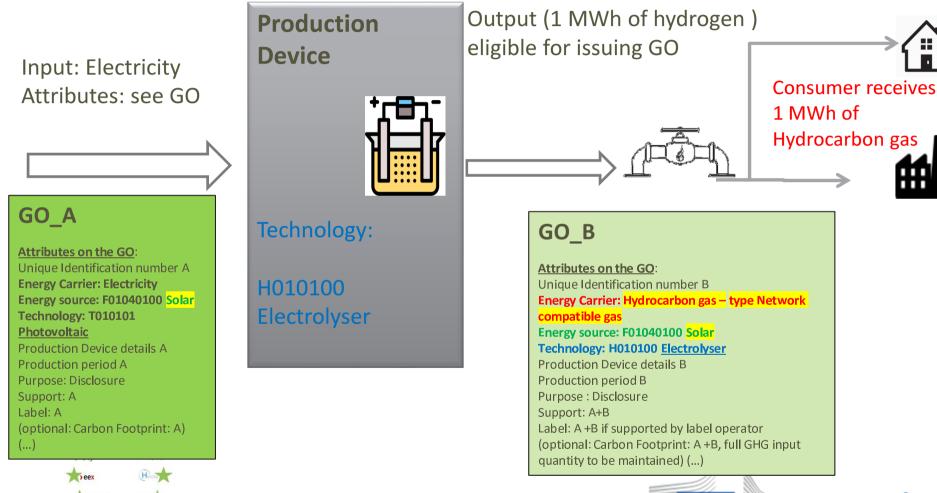
Electricity converted into Hydrogen



Commission



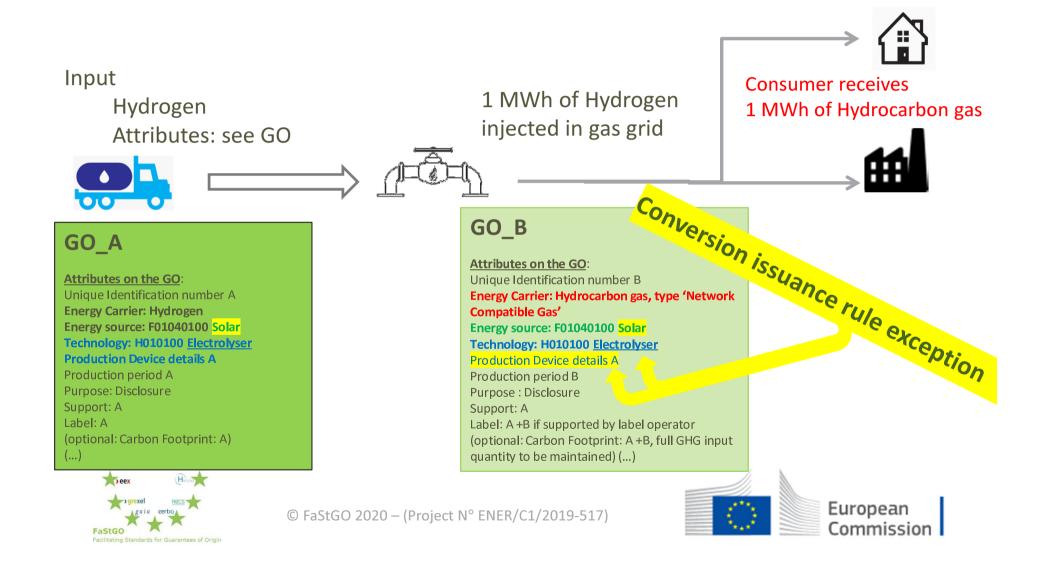
GO issuing for hydrogen injected into natural gas network, (a) hydrogen produced at the grid injection site





Facilitating Standards for Guarantees of Origin

GO issuing for hydrogen injected into natural gas network, (b) hydrogen from other production location



Facilitating sector integration

Building blocks:

- Generic GO system for all energy carriers
- Conversion issuance rules
- Install processes: Issuing body shall verify cancelled GOs of input energy carrier
 - ⇒ Link cancelled GOs to measurements of new production
 - ⇒ Allocation of Issuing Body roles / communication between issuing bodies





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Thank you for your attention

Katrien Verwimp, FaStGO project leader

Katrien.Verwimp@enunda.eu fastgo@aib-net.org



